

WHAT IS CLAIMED IS:

1. A memory system comprising:
a memory device further comprising an array of cells formed in rows and columns;
a control signal controlling operation modes of the memory device; and
a generator receiving the control signal providing a refresh request at a same period if the control signal is deactivated, providing no refresh request in response to a first state of the control signal if the control signal is activated, and providing a refresh request in response to a second state of the control signal if the control signal is activated.
2. The system of claim 1, the generator providing a refresh request at a same period in response to the second state of the control signal if the control signal is activated.
3. The system of claim 1, the generator providing refresh requests at different periods in response to the second state of the control signal if the control signal is activated.
4. The system of claim 2, the control signal further comprising a pulse width smaller than half the same period.

5. The system of claim 1, the generator further comprising a clock generator generating a clock signal at a same period if the control signal is deactivated.

6. The system of claim 1 wherein the control signal is connected to a fixed voltage level when deactivated.

7. The system of claim 1 further comprising:
a column decoder including a plurality of pass gates; and
an amplifier unit disposed between the memory device and the column decoder further comprising a plurality of sense amplifiers corresponding to the pass gates.

8. The system of claim 1, the memory device being operated in continuous access cycles in response to the first state of the control signal.

9. The system of claim 1, the memory device being operated in continuous refresh cycles in response to the second state of the control signal.

10. A method of operating a memory device including an array of cells formed in rows and columns comprising:
providing a control signal;

activating the control signal, the activated control signal including a first state and a second state;

continuously performing access cycles in response to the first state of the activated control signal in one part of a period; and

continuously performing refresh cycles in response to the second state of the activated control signal in another part of the period.

11. The method of claim 10 further comprising providing the period within which each of the cells is refreshed before data stored therein are lost.

12. The method of claim 10 further comprising allocating to each of the access cycles a first access time for selecting and sensing a row of cells and a second access time for data output in continuously performing the access cycles.

13. The method of claim 10 further comprising allocating to a first of the access cycles a first access time for selecting and sensing a row of cells and a second access time for data output, and allocating to each of the remaining access cycles the second access time.

14. The method of claim 10 further comprising:
deactivating the control signal; and
generating a refresh clock signal at a same period.

15. The method of claim 10 further comprising providing the control signal with a pulse width smaller than half the period divided by the number of total refresh cycles performed.

16. A method of operating a memory device including an array of cells formed in rows and columns comprising:

providing a control signal including a first state and a second state;

determining a period within which each of the cells is refreshed before data stored therein are lost;

determining the number of refresh cycles to perform in the period;

performing at least one refresh cycle in response to the second state of the control signal; and

allowing at least one access cycle to perform in response to the first state of the control signal.

17. The method of claim 16 further comprising continuously performing access cycles in one part of the period, and performing refresh cycles in another part of the period.

18. The method of claim 16 further comprising performing a refresh cycle at each of a plurality of sub-periods in the period.

19. The method of claim 18 further comprising performing a refresh cycle at each of the sub-periods of a same time length.

20. The method of claim 18 further comprising performing a refresh cycle at each of the sub-periods of different time lengths.

21. A method of operating a memory device including an array of cells formed in rows and columns comprising:

providing a control signal;

deactivating the control signal by connecting the control signal to a fixed level;

providing a refresh request at a same period;

activating the control signal;

providing no refresh request in response to a first state of the activated control signal; and

providing at least one refresh request in response to a second state of the activated control signal.

22. The method of claim 21 further comprising:

determining a period within which each of the cells is refreshed before data stored therein are lost; and

determining the number of refresh cycles to perform in the period.

23. The method of claim 22 further comprising determining the same period as dividing the period by the number of refresh cycles to perform in the period.

24. The method of claim 21 further comprising:
maintaining the control signal at the second state; and
continuously performing refresh cycles in the period.